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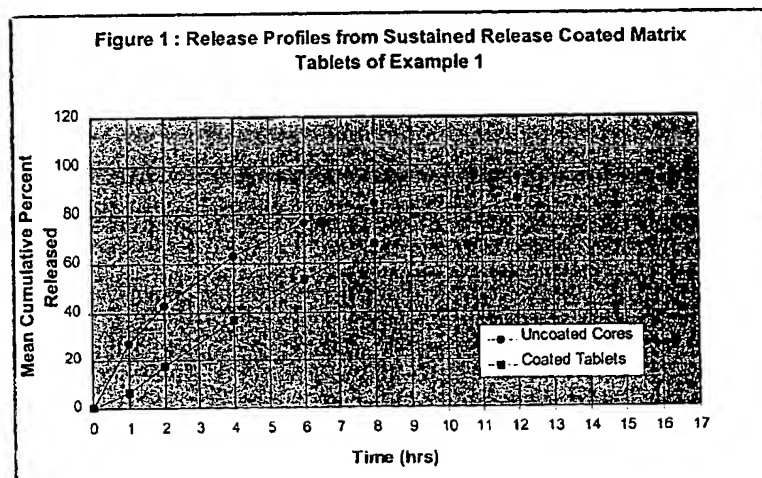
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- (71) Applicant: EURAND AMERICA, INC. [US/US]; 845 Center Drive, Vandalia, OH 45377 (US).
- (72) Inventors: CLEVINGER, James, M.; 1866 Old Springfield Road, Vandalia, OH 45377 (US). GALLO, Alfio, B.; 825 Revere Village Court, Centerville, OH 45458 (US). LEE, Der-Yang; 10 Kentworth Court, Flemington, NJ 08822 (US). VENKATESH, Gopi, M.; 4310 Limerick Lane, Dayton, OH 45440 (US). VISHNUPAD, Krishna, S.; 1458 Clear Brook Drive, Dayton, OH 45440 (US).
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(54) Title: DUAL MECHANISM TIMED RELEASE DOSAGE FORMS FOR LOW DOSE DRUGS



(57) Abstract: In accordance with the present invention, the release rate of a bioactive material from a hydrophilic polymer matrix core is modified by applying a water insoluble polymer membrane. The core composition as well as the membrane thickness are varied in order to achieve desired release profiles, from rapid release rate changing to near zero order release profiles with or without a lag time of up to 6 hours. The drug release from the dosage form of the invention is controlled by dual mechanism, viz., the dissolved drug first diffuses through the gelled polymer matrix and then through primarily a water insoluble polymer (semi-permeable) membrane, thereby providing the flexibility of modifying the release profiles including lag time for therapeutic agents for maximizing efficacy and patient compliance. As an illustration of this flexibility, the release profiles of Levalbuterol and Sotalol are described.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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A. CLASSIFICATION OF SUBJECT MATTER

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	US 4 871 549 A (UEDA YOSHIO ET AL) 3 October 1989 (1989-10-03) column 1, line 50 -column 2, line 30 column 7 -column 8; examples 1-3 ---	1-11, 18, 19
X	EP 0 793 959 A (TAKEDA CHEMICAL INDUSTRIES LTD) 10 September 1997 (1997-09-10) column 9 -column 10; example 1 column 4, line 3 - line 33 --- -/-	1-10, 18, 19



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European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040. Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Muller, S

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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